STUDIES IN *RHYNCHOPHORA*.

BY D. SHARP, M.A., F.R.S.

2.—THE BRITISH BAGOINI.

As previously stated (*ante*, p. 27) Lacordaire mixed insects of two divisions of *Rhynchophora* under the name of *Hydronomides*. One of these divisions I have already discussed, and I here deal with the British forms appertaining to the other. According to the views here to be expressed, these weevils belong to a great group to be called *Lixidae*, and consisting of the syntheses *Cleonini*, *Lixini*, *Rhinocyllini*, *Larinini*, *Paipalesomus* and *Bagoini*. These insects differ from all other *Rhynchophora* inasmuch as the elongate struts of the median lobe are replaced by a pair of short callipers.

Bagoini differ from the other groups of *Lixidae* by possessing filiform in place of lobed tarsi. They appear to form a natural division, very easily defined by those two characters. The filiform tarsi are extremely exceptional in *Rhynchophora*. Outside the *Bagoini* they reappear in the genus *Parabagous* of the *Pseudobagoini*; but in that genus the aedeagus is constructed as in normal *Curculionidae*.

These particulars are sufficient for my present purpose, but I may add that I have been for some time engaged on a memoir on the classification of the *Rhynchophora*, which I hope to publish if I can obtain a sufficient number of critical genera for dissection.

The European *Bagoini* were discussed by Henri Brisout de Barneville in 1863, in the Annales de la Société Entomologique de France, pp. 491–524. Since then Thomson has described several species supposed to be new, but which cannot be recognised from his descriptions alone, the aid of his types being necessary.

The species of *Bagous* are very difficult of recognition by mere inspection, but the tarsi differ from species to species and do not vary, while the aedeagus in nearly all cases affords a decisive criterion. Our British forms fall into four genera.

PROBAGOUS, gen. nov.

Tarsi elongati; aedeagus temonibus minutis incurvatis.

Type of the genus *P. heasleri* Newbery.

This genus has the tarsi more elongate than any of our species of *Bagous*, and the aedeagus is very distinct on account of the very minute callipers, and the absence of a transverse bridge at the base of the upper lip of the median lobe.

I adopt the term "temo" for the prolongation at the base of the median lobe. *Probagous* is highly exceptional in this respect, and the term is not there a good one; but in other *Rhynchophora* it is suitable, it being understood that the processes in question are always paired.

1.—*Probagous heasleri*, sp. n.

Bagous tempestivus var. *heasleri*, Newbery, Ent. Rec. xiv, 1902, p. 149.

This is a very distinct species, the third joint of the tarsus being distinctly broader than the second, and the aedeagus having marked peculiarities.

There is a general resemblance to *P. cnemerythrus*, but the thorax is nearly straight at the sides behind the anterior constriction, and the elytra are less parallel; near the apex they are very suddenly narrowed, but there is no nodular elevation. When alive the species is at once recognisable by the very extensive and conspicuous pale fascia behind the middle of the elytra; but this nearly always disappears, the insect becoming uniformly greasy and black. The tarsi are very long, the third joint being about twice as long as broad, distinctly longer than the second, though somewhat emarginate beneath, concealing the true fourth joint, so that this tarsus approaches more nearly to the normal curculionideous foot than does that of any other *Bagous*.

The aedeagus has a considerable general resemblance to that of *B. cnemerythrus*, but the apical portion is broader; the basal callipers are remarkably small, the bridge of the tegmen is absent; the superior appendages are long and slender.

This extremely interesting insect has occurred only in the New Forest, where, however, it is very rare. Mr. Newbery informs me that it is known to occur in France.

2.—*Probagous cnemerythrus* Marsh.

Curculio cnemerythrus Marsh. Ent. Brit. p. 268.—*Bagous cnemerythrus* Boh., in Schönh. Gen. Curc., viii, 2, p. 33.—*Bagous tempestivus* Bris., Ann. Soc. ent. Fr., 1863, p. 507; et Catt. britt.—*Bagous dilatatus* Thoms., Skand. Col. x, p. 342.

Var. ?, minor, angustior.

Bagous angustatus Thoms., Opusc. ent. ii, 1870, p. 139.—*Probagous convexicollis* Sharp, Ent. Mo. Mag., lii, p. 225. (nec *B. convexicollis* Boh.).

This is a very variable species. It is of more elongate form than any of the *Bagous* proper, and has a longer abdomen, with a longer and narrower intercoxal process, and the third and fourth segments not so short. Usually it is more or less tessellate, the colours being white and obscure black; but the coloration varies greatly, and in some cases the insect looks almost white.

The aedeagus is very much simpler in structure than it is in *Bagous*; there is no transverse bridge at the base of the upper lip; the basal callipers are minute, and the superior processes of the tegmen are long but extremely slender, and basally conjoined; the tip of the median lobe is blunt and not pointed.

The largest specimens have occurred in Sheppey. A specimen of the white form from Finchley is in the Crotch collection, bearing Brisout's label, "*tempestivus*."

B. dilatatus is stated in the European catalogue to be a synonym of "*tempestivus*." Accepting that as correct, I must at present place *angustatus* Thomson as a variety, although it is given a separate place in the European catalogue. At first I thought it probably another species, but on renewed examination I am not able to find any satisfactory distinctive characters in the external structure, and so far as I can judge from the examination of old, dried specimens, the aedeagus is very similar in the two forms, being only a little more parallel in *angustatus*, with the tip slightly more rounded. At present it is better to treat the two as one species.

B. angustatus used to occur in the Hammersmith marshes in company with *Lyprus cylindrus*; I have not seen any example from elsewhere that I can with certainty refer to it, though Mr. Bedwell has found, at Askham Bog, Yorks., two specimens that are scarcely different. At Hammersmith the form occurred with *cnemerythrus*; and at Rye, Bedwell has found a specimen very near, if not it, in company with *cnemerythrus*.

As regards the name of the species, Boheman, in Vol. iii of Schönherr's work, recorded "*tempestivus*" as British, on the authority of a specimen sent to him by Spence. In Vol. viii, p. 83, he revised his work on *Bagous*, and states expressly that English and French "*tempestivus*" were not that species, and he describes them as *cnemerythrus* Marsh., which was named by Marsham from a specimen in Kirby's collection.

At present "*tempestivus*" and *cnemerythrus* are considered to be one species. It is quite doubtful what "*tempestivus*" Herbst really was, and under the circumstances I think we had better call our larger form *cnemerythrus*. Waterhouse states, on the authority of Kirby's collection, that *cnemerythrus* Marsh. was *Lyprus cylindrus*, but I think this was a mistake arising from the true *Lyprus* being then scarcely known in Britain.

LYPRUS Schönherr.

This is a valid genus. The rostrum is longer than in the *Bagoini*, and the aedeagus, though it exhibits some relation with that of *Probagous*, has important peculiarities. There are no superior appendages, the strut of the tegmen is short; the peculiar bridge at the base of the orifice of the median lobe is absent, and the orifice is placed in the middle of the length of the tube; whether there is a long upper lip or only a very short one cannot be determined from my specimens.

1.—*Lyprus cylindrus* Gyll.

This species is readily distinguished by its elongate, narrow elytra, by the long, slender tarsi, the unusually long metasternum and basal segments of the abdomen, and by the longer apical portion of rostrum.

It is only rarely met with in this country, but is sometimes in large numbers when found. When I discovered it at Hammersmith Marshes in October, 1863, it was in great profusion, and Dr. Power, and others who afterwards went to the same spot, also found it in plenty. Mr. F. Smith informed me that there was then only one British specimen known.

BAGOUS Germ.

I select *nodulosus* as the type of this genus, a course I believe to be in accord with the views of Schönherr.

In this difficult genus the tarsi are of great importance: they differ from species to species, and in *B. inceratus* are definitely pentamerous.

1.—*Bagous nodulosus* Herbst.

Distinguished from all the other species of the genus by its large size (length, 4–5 mm. from tip of abdomen to front of thorax), covered with a grey or clay-coloured glaze, nearly uniformly.

The aedeagus is remarkable by the long upper lip of the median orifice, which is apparently alway elevated by a trigger-like structure. The bridge of the tegmen is moderately broad, the strut is about as long as the diameter of the tegmen; the tegminal appendages are quite obsolete. The space enclosed by the callipers is rather larger, and the two are a little prolonged anteriorly. and there nearly parallel and contiguous. The species occurs in the southern part of the Kingdom in several localities, and occasionally in some numbers, but it is far from common.

2.—*Bagous claudicans* Boh.

Variable in size, from $2\frac{1}{4}$–3 mm. long. The elytra are rather broad, and stand out at the shoulders very much beyond the thorax, which is about as long as broad, and is somewhat coarsely rugose. The coloration is markedly maculate, and has a very slight olivaceous tinge in fresh specimens; a pale mark beyond the middle is usually conspicuous. The antennae are variable in colour, usually largely yellow, with a very broad dark club; the dark colour sometimes extends nearly to the base, but this always remains yellow. The tarsi are of moderate length, sometimes yellow, generally a good deal infuscate; the second joint of the posterior pair about as long as it is broad.

The aedeagus is characteristic and invariable (when mature). I have examined it in about 20 specimens. The callipers are very slender at the tips, convergent and contiguous there, and inclose a rather large area. The apical portion of the median lobe is broad; the actual apex is broad, almost truncate, with a very minute acumen on each side. The bridge formed at the base of the margin of the upper lip of the median orifice is very marked, rather deeply sinuate on each side, and with a short longitudinal elevation in the middle. The tegmen forms a slender ring, with a pair of delicate, slender appendages in the middle, joined at the base; the strut is slender, rather longer than the diameter of the tegmen.

This species seems to be but little known in collections, but it is abundant at Brockenhurst in the spring and autumn and may sometimes be found in hundreds; it frequents the muddy margins of small stagnant pools. It has also been found by Mr. Tomlin at Tresco in the Scilly Islands, and Mr. Bedwell has a single example from the New Forest; Campbeltown, one specimen, November, 1894 (*J. J. Walker*); Edenhall, Cumberland, 13.v.'06 (*Britten*, one specimen).

The proper name of this species is still doubtful. *B. claudicans* and *mundanus* are considered to be synonyms, and if this be really the case, the name *mundanus* should be used, as it comes first in the book where both were originally described. Brisout mentions several varieties, most of which are probably distinct species. One of these, "*fritillum* Walton," was, I believe, never published, so that we are spared the necessity of determining it.

3.—*Bagous tomlini*, sp. n.

B. claudicantis persimilis. Minor, niger, griseo-variegatus, antennis (clava excepta) testaceis, tibiis fusco-testaceis vel nigris; tarsis gracilibus, fere elongatis. Long., 2¼ mm.

This is extremely similar to the preceding species (*B. claudicans*), but appears to be smaller, has no olivaceous tint, the elytra are not so broad, so do not stand out so much from the thorax, and the sculpture of the thorax is a little finer. The tarsi are rather longer and more slender, the second joint of the posterior being not so broad as it is long. The aedeagus differs markedly, having an acuminate slender extremity, and the bridge of the upper lip of the median orifice more distant from the apex. The tegmen is remarkably slender and delicate, with very long slender strut, and superior appendages.

Three examples were found by Mr. Tomlin in the Romney Marshes many years ago; and there is a specimen in the Chitty collection at Oxford, labelled " New Fst. Ju. 1, 1893."

4.—*Bagous arduus*, sp. n.

B. claudicantis persimilis, tarsis elongatis facile distinguendus. Long. 3 mm.

Although I have seen only a few specimens of this insect, there is no doubt as to its being a distinct species, the aedeagus being quite adequately diagnostic. It is rather broad and shaped much as in *claudicans*, but the apex is broad, truncate, feebly bisinuate, and the upper lip of the orifice is more distant from the apex. The tegmen and basal portions of the organ seem to be much the same as in *claudicans*.

I do not attempt to sketch the minor details of the species, the material being so scanty; but independent of the aedeagus the longer tarsi readily differentiate *B. arduus*.

My unique specimen was given to me many years ago as "*frit*" (= *claudicans*). I cannot decipher the writing on the card, but the insect is probably from the London district. In the Champion collection there are five examples (Woking, 1.ix.'78) that are almost certainly this species, but the aedeagus has not yet been examined.

There is also a specimen from France in the Chitty collection at Oxford, labelled "*claudicans.*"

5.—*Bagous diglyptus* Boh.

This species is problematic. All I can say about it is that there is an example so named in the Chitty collection at Oxford that is distinct from anything else known to me. This individual does not, however, agree with the description of *diglyptus* given by Fowler (Col. Brit. Isls. v, p. 291), so that there may be two rare species in Britain under this name. The brief description of *diglyptus* given by Henri Brisout de Barneville (Ann. Soc. ent. France, 1865, p. 505) does not satisfactorily accord with the Chitty specimen. All I shall say about it is that it is very like *claudicans*, but the thorax is more rounded at the sides and more finely sculptured, and the striae of the elytra are deeper and the tarsi longer. This insect was found at Stalham Broad in Norfolk, 8.vi.'06. The specimens described by Fowler were found on the banks of the Trent at Burton.*

6.—*Bagous lutulosus* Gyll.

Readily distinguished from all our other species by the very short tarsi and the deeper striation of the elytra; the surface of the thorax is uneven, and the species is one of the few that can be recognised at a glance. I have not examined the aedeagus.

B. lutulosus seems to be rare. Fowler gives several localities, including Ireland, which I consider very doubtful. It occurs in the New Forest, where, however, I have found only single specimens at intervals of several years.

7.—*Bagous brevis* Gyll,

This species is nearest to *lutulosus.* It has a very uneven surface of the thorax and rather deep striation of the elytra; the tarsi are longer than in *lutulosus.* The aedeagus is much like that of *claudicans*, it has a broad apical portion, but the tip—unlike that of the commoner species—is quite rounded.

B. brevis occurs at Brockenhurst in company with *claudicans*, but as a great rarity. It has also been found at Woking, but not, I believe recently.†

---

* These were determined by M. Brisout de Barneville in 1879, when *B. diglyptus* was first recorded from Britain (*cf.* Ent. Mo. Mag., XV, p. 235).—G.C.C.

† April and May, 1904, J.J.W. and G.C.C., Ent. Mo. Mag., XL, p. 168.—Eds.

8.—*Bagous limosus* Gyll.

This is another easily-distinguished species, being of broad form, with the thorax much rounded at the sides and narrowed behind; the elytra has very large punctures on the striae, but these are not readily seen, as the insect is nearly always very dirty. The tarsi are elongate. The aedeagus is elongate with a narrow pointed tip, and the superior appendages of the tegmen are quite small.

The species appears to be widely distributed in the south-east of England; it is not uncommon at Brockenhurst. Sheppey (*J. J. Walker*, *G. C. Champion*); Tollesbury, Essex, v.'08 (*W. Bevins*, in coll. *Britten*).

9.—*Bagous argillaceus* Gyll.

This insect is extremely variable in size. In fresh specimens it is recognised at once by the peculiar glaze of the surface. The eighth joint of the antennae is broader than usual, and the tarsi are definitely 5-jointed.

The aedeagus bears a general resemblance to that of *B. nodulosus*, but is without the prominent trigger arrangement, and the basal callipers are more slender. I have examined only one specimen.

B. argillaceus was described from the Caucasus, and we may be permitted to doubt whether our English insect is really it. In this country this species appears to be almost confined to the lower part of the Thames Valley, and we are indebted to Mr. Champion and Commander Walker for supplying our collections with it.

It has been taken sparingly by Moncreaff in Portsea Island (Ent. Ann., 1890, p. 106; Ent. Mo. Mag., Vol. VII, p. 154).

ELMIDOMORPHUS Cussac.

This genus should, I think, be provisionally retained, as the structure of the club of the antenna is quite distinct from that of all other *Bagoini*, and is indeed remarkable for a Curculionid.

The alteration of the name to *Helmidomorphus*, or to *Helminthomorphus*, cannot be accepted, as the change is that of the first letter; and moreover does not bring accord with Grecian orthography, although this is its *raison d'être*.

1.—*E. aubei* Cussac.

I have not been able to examine the aedeagus of this rare insect, of which only three or four specimens have been found in Britain. I adopt the name under which it was well figured and described, as I have no belief in its being the *petro* of Herbst.

Brockenhurst:
March 30*th*, 1917.

The habits of Parabagous binodulus.—As this species is so very rare in our collections, I think it worth while to call attention to M. Gadeau de Kerville's notice of its habits (Ann. Soc. ent. France, 6.v.1885, p. 425). It lives in Normandy on *Stratiotes aloides*, and gnaws both the leaves and the perianth, usually keeping under water but frequently letting itself float to the air for respiration. It was observed in May or June in the imago state, and the insect hibernates in that condition on the ground in the neighbourhood of the plant. Probably a little attention from those who live where this plant is well at home, would lead to its rediscovery in this country.—D. Sharp, Brockenhurst: *April* 4*th*, 1917.

Birch Wood and Hammersmith Marshes.—These two localities are now "portions and parcels of the dreadful past." They, with Darenth Wood, were 60 years ago amongst the very best spots in Britain for Entomology. In answer to Mr. Donisthorpe's inquiry, I may say that he will get the knowledge he asks for from Shield's "Practical Hints respecting Moths and Butterflies," p. 56, and from Crutchley's Map of the environs of London and 30 miles round, published by Arrowsmith in 1824. The latter was one of the best maps I have ever consulted, and it was my guide in my entomological wanderings about London, now from 50 to 60 years ago. At that time I not only collected at Birch Wood but dined at the Bull Inn there with the members of the old Entomological Club. Birchwood Corner is on the Maidstone road a mile-and-a-half due west of Swanley, and the Wood started from the corner, extending due south. When I was residing at Dartford thirty years ago I revisited the spot, but found it covered with houses built by some speculator, and several of them in ruins though they had never been inhabited.

When in London last year I went to Hammersmith to try and identify the old collecting ground. I quite failed; and what a falling off I found! What people call the advance of civilisation produces a very depressing effect on those of us who recollect the beauty of suburban London 60 or 70 years ago. Hammersmith Marshes and Notting Hill Marshes were the same locality; when entered from the north they were called Notting Hill, when from the south, Hammersmith. A walk of a mile-and-a-half north-west from Holland House would traverse these old marshes. The way to identify this spot from Crutchley's map is to note "Notting Barn Farm" and "Atley's Farm," which were on the outskirts of the Marshes.—D. Sharp, Brockenhurst: *April* 4th, 1917.